

Russia Shows 'High Competence' In Building Its Industrial Might

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By ALLEN W. DULLES

The Soviet Union has become the second greatest industrial power in the world. Today the gross national production of the USSR is slightly more than one-third that of the United States; it is about three-fourths again as large as that of the United Kingdom, which ranks in third place. We still have a very great lead, but the Soviet rate of progress is rapid.

Capital goods and basic materials form in the Soviet Union a greater share of its over-all gross national production than in the United States. Thus while their gross national production was only one-third of ours, their production of capital equipment is a much higher percentage, namely, about 45 per cent of ours.

A few examples will graphically illustrate the areas of difference. The Soviet production of machine tools now exceeds that of the United States. However, their production of automobiles is between 1 per cent and 2 per cent of our own (although if one adds in trucks as well as automobiles, their automotive production is about 5 per cent of ours). We produce 50 washing machines for every one produced in the USSR, and 5 radio and TV sets for each one they produce for a population almost one-fourth larger than ours.

But before going into a more detailed comparison of the two countries in the industrial and educational fields, it may be worth while to consider the general basis we adopt for appraising Soviet technical competence and accomplishments.

Because of rapid advances that the Soviet Union has made in recent years, there is a growing school of thought that tends to exaggerate Soviet accomplishments, to portray the Soviets as the "giants" of the industrial world. There is another school that tends to belittle what they have done and to consider that while good at chess, the ballet or even in sports, they are in some way mentally inferior to Westerners. The truth lies with neither of these extremes.

In my work as the director of the Central Intelligence Agency, I have the problem of gathering together from all intelligence sources available both here and abroad, the facts and figures on the Soviet economy and then getting the most competent experts available, in and out of Government, not only those in the CIA itself, to examine and analyze these facts and figures.

Allen W. Dulles, director of the Central Intelligence Agency, has at his fingertips more information on developments in the Soviet Union than any other man in the Federal Government. Because of the secrecy which shrouds CIA he seldom makes public any of that information or conclusions it has caused him to draw. He departed from this policy recently, however, in an unusual speech in Cincinnati, from which this article is derived.

In general, this examination has led me to the conclusion that the only safe position to take is that in technical, engineering and industrial fields the Soviets can achieve any particular objective we can achieve. Of course they like to let us do the pioneering in many fields and then copy our results. In some fields, however, they are doing pioneering work on their own.

Those who have assumed that we have superior technical skills, that we could produce atomic weapons, aircraft and the like which are beyond the competence of the Soviet, have generally proved to be mistaken. Certainly in recent years I have not proceeded on any such assumption.

Highly Efficient Aircraft

The Soviets have shown high competence in the field of nuclear development both for military and peaceful purposes. They have produced highly efficient aircraft, from heavy bombers to helicopters. They are highly competent in the field of electronics, their steel industry is efficient and the same is true generally across the board in the industrial field. Where we particularly excel is in our highly competent manpower and in the efficient use we make of it, particularly through the incentives our society provides to call forth individual effort.

There is no doubt that in many countries, particularly among the countries in Asia which have obtained freedom over the past few decades, the rapid industrial progress of the Soviet Union has made a very deep impact.

These Asian countries tend to forget that the Soviet Union has built upon years of pioneering work in the United States and Western Europe, particularly in developing their industrial revolutions through basic discoveries in the field of internal combustion, electricity, and the like. The Soviets, in fact, started more than half way down the course of the industrial revolution

The USSR in its industrial programs has accorded second place to its people's needs or wants. If the Soviet leaders wish to concentrate on military development at the expense of all else, they do so. If they wish to invest most of their money in heavy industry—as they have done—at the expense of light industry and agriculture, they do so. If the labor force, from their point of view, can be used to better advantage in one field than another, they can and do shift it accordingly.

Reason for Confidence

While, as I have indicated, the Soviet industrial base is still only a fraction of our own, it is nevertheless large enough to permit the Soviet leaders to expand impressively their military capability, to play an increasingly active economic role in undeveloped areas and to speak confidently at the 20th Party Congress of closing the gap between their output and ours.

As we assess our own position of leadership and look to the future, it may be well to note the challenge which this represents, to understand how this rate of growth has been achieved and also to look at the prospects for the future.

The value of Soviet total economic output has increased almost three-fold from 1928 to date and this despite a devastating war which set them back severely during the period 1941-1945. The rate of their industrial growth during this period has been about twice as high as the rate of their overall growth since important factors of their economy have lagged, particularly agriculture and consumer goods.

How has this rate of industrial

growth been achieved? Four factors seem particularly important.

1. A large part of the total national production of the USSR has been devoted to investment. We estimated that 24 per cent of the gross national production went directly into capital investment in 1955 to increase the base for future industrial growth and expanded military capabilities. Only 18 per cent of our gross national production is currently being used for capital investment purposes and this is the highest percentage achieved in the postwar period.

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Of course it is consoling to note that 18 per cent for us amounts to a far greater absolute total than 24 per cent for them. In their case, however, heavy industry has been the major beneficiary and is now absorbing about 50 per cent of their total investment.

Industrial plants and equipment in the Soviet Union have nearly tripled since 1940 and their investments have been allocated predominantly to the coal, oil and electric power industries, to metalworking and metallurgical industries.

2. Millions of workers have been transferred from agriculture to urban occupations and the agricultural labor force actually declined some 6 per cent between 1938 and 1952. This loss, despite extraordi-



Allen W. Dulles
Offers words of caution

—Sketch by Newman Sidduth

nary efforts, has barely been made good in the past three years. The nonagricultural force on the other hand increased about 60 per cent during this period.

3. A prodigious effort has been expended on scientific and technical education. Soviet colleges receive about 500,000 students and graduate about 250,000 each year. Total United States entrants and graduates are about 10 per cent higher, but the Soviets train a far greater proportion in the sciences than we do. In 1955 about 60 per cent of graduating full-time Soviet students were in scientific and technical fields compared with about 25 per cent in the United States. In 1955, the Soviet Union graduated from all advanced schools about 80,000 in the physical sciences and engineering and about 50,000 in the biological sciences. In the United States about 37,000 were graduated in the physical sciences and 39,000 in the biological sciences. At this greater rate of graduation in sciences—now 130,000 annually in the Soviet Union as opposed to 77,000 in the United States—the Soviets will attain an imposing advantage in number of scientists and engineers in a few years time if they and we continue at our present rates.

The USSR now has about two-thirds the number of scientists that the United States has in the research and teaching aspects of physical and biological sciences; 190,000 versus 280,000. In research alone, the USSR has about half the United States' number; 120,000 versus perhaps 240,000.

4. As I indicated above, Soviet industry has advanced by relying on the accumulated scientific and technical developments in the free world. Soviet leaders have telescoped a century and a half of painstaking research effort into a few years and have realized all its benefits at relatively little cost to themselves.

The principal long-term economic task of the Soviets as expressed in the sixth 5-year plan, is "to overtake and surpass the most developed capitalist countries as regards per capita production."

This general objective has been thus amplified by Saburov, a member of the Politburo:

"It is true that we have not yet caught up to the United States either in the volume of production per capita, and so far in the volume of industrial production per capita. However, the pace of our development, which by many times exceeds the pace of the growth of industry in the United States, permits us to overcome this lagging behind within a very short historic period of time."

If this goal is to be achieved it means that forced draft industrialization will be continued not only through the sixth 5-year plan, but beyond. It will be accompanied by low standards of living, continued poor housing, few services, very expensive clothing and an adequate but uninspiring diet. Hours of work will be high by United States standards even though some further gradual reduction from the recently announced 46-hour week may be expected. The individual will have relatively little freedom to select either his occupation or place of work. How long will the Soviet men and women tolerate this?

Soviet plans for the next five years, if they are met, will significantly strengthen the USSR's

war supporting potential. Over and above the general strengthening of the industrial base, it is expected that the output of the electronics industry, which contributes many essential items required in high performance military equipment (including guided missiles), will be tripled. Also, in the field of special heat resistant alloys where the Soviets have done so much for fundamental research, the new five-year plan calls for a sixfold increase in production.

Can the new goal be achieved? We have already commented on the major effort which the Soviets are making in the field of scientific and technical education. It is now to look at their plans for improved mechanization. Do they have command of the necessary technology?

great emphasis on the production of machine tools. We have already observed that their output in 1955 exceeded ours. Not only can they produce these tools in volume, but they have the capability to produce complex high-precision tools.

Starts in Automation

The sixth five-year plan outlines in some detail Soviet plans for the future. These call for the introduction of automatic processes in the metallurgical, extractive, machine building, electro-technical, chemical and construction industries as well as a number of consumer goods industries. In the machine-building industries it is proposed to put into operation some 220 automatic and semiautomatic lines and shops. Obviously, this is just a start.

In order to assure the rapid introduction of improved production processes, a new ministry has been created—the Ministry for Instruments and Means of Automation.

What this seems to mean is that the Soviets have now passed the point where expansion of output is to be achieved by simply adding more plant and equipment to the existing stock of capital. Questions of plant modernization and equipment replacement, of better work methods and processes will command increasing attention as the more economical means for achieving output goals.

That the rapid pace of Soviet industrialization has commanded a high price in terms of consumer living standards and particularly in terms of agricultural production is clear. Both manpower and investment have been diverted from the farms to the urban centers. The result is that the growth of agricultural output over the past two decades has been lower than the growth of population.

There is an approach to the agricultural problem, however, which the Soviets may exploit regardless of how well they succeed in meeting their agricultural goals.

As Soviet industrial capabilities rise and as costs of production decline, the opportunities for trading Soviet industrial commodities in world markets for agricultural supplies will undoubtedly appear increasingly attractive. Moreover, their economic capabilities appear to fit nicely with their political objective of increasing the volume of trade with underdeveloped countries.

Thus it may well turn out that the industrial growth which the Soviets have pushed so aggressively will provide a solution not only to the problem of feeding their growing population, but also the means for furthering their political ambitions in the underdeveloped areas of the world.

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The Soviet industrial and educational systems which I have been describing depend upon the dictatorial controls inherent in the Soviet system. I have suggested that the emphasis they have been placing on heavy industry has been at the expense of the standard of living and consumer goods for the people. Their educational system has likewise been subject to the dictates of the state.

How long will the Soviet people tolerate this situation; what courses of action, what alternatives do they have? Education, after all, is a dangerous drug for dictators. The Soviet educational processes, even though tied in with much Marxist indoctrination, and characterized by great emphasis on the physical as opposed to the political sciences, has taught the people to think and to question. Industrial development on the

large scale I have indicated has developed many plant managers and high-grade technicians. This is all creating a "middle class" managerial group who feel a vested interest in their jobs and want to keep the advantages they enjoy. The pressures that these trends have created cannot be ignored by the men in the Kremlin. While they have arbitrary power, they dare not exercise it with total disregard for the feelings and sentiments, the convictions and yearnings of the people on whose efforts the Soviet system depends.

Back to Malenkov Idea?

We have already seen that Malenkov when he took over the Kremlin leadership in 1953 started a trend toward producing more consumer goods. Then, presumably as the effect of this began to be felt too drastically in the field of heavy industry and military preparedness, the trend was substantially modified, and in the process Malenkov was demoted. Malenkov is still in the Politburo, and he may be coming back again to a position of greater influence. Does this foreshadow another round of offers of greater material benefits? This time will the Soviet people again have to live on promises of a better life or will this dream have some reality?

The Soviet leaders have been taking certain steps both internationally and domestically which they hope will have a calming effect on their own public opinion. These steps are bound up with the dramatic program of de-Stalinization, which is an attempt to repudiate their erstwhile hero, dictator, political and military leader and expounder of the Marxist-Leninist faith.

It is not easy to predict the direction, in broad human terms, that Soviet society will take. The Soviet leaders themselves probably do not see clearly the final turnings of some of the paths down which they have set. My guess is that modern industry, technology and education, which today unquestionably are making the Soviet Union into a very powerful nation indeed, may in the long run prove to be a leaven that gradually transmutes Soviet society into a new form which will not tolerate the present type of dictatorship.